

148. (New) A method according to claim 112, wherein the controlling step controls the telephony system to accept a new input speech command from the user while reproducing a message and uses the recognition result of the new input speech command.

149. (New) A method according to claim 112, wherein the controlling step controls the telephony system to notify the user when all messages identified by said identifier are reproduced.

150. (New) A method according to claim 112, wherein said receiving step receives an input speech command comprising a plurality of continuously spoken words defining a desired telephony service;

wherein the method further comprises the step of storing a language model which defines sequences of the reference word models which can be compared with the input speech command, in order to define allowed input speech commands; and

comparing the input speech command with selected sequences of the reference word models, selected in accordance with the stored language model and wherein said controlling step executes an operation corresponding to the input speech command.--

REMARKS

Claims 63 to 85 and 88 to 138 were allowed and a Notice of Allowance issued on November 2, 2001. The present RCE was filed to further amend the claims and to add new claims.

Accordingly, Claims 63 to 85 and 88 to 150 now are pending in the present application. Claims 63, 65, 67, 70, 72, 76, 83, 89, 91, 93, 96, 98, 102, 109, 112, 114, 116, 119, 121, 124, 131, and 134 have been amended. Claims 139-150 have been added. Claims 63, 64, 88, 89, 90, 112, 113, and 131 to 138 are independent.

Applicants believe that the subject application is in allowable form. Favorable consideration of the claims and passage to issue of the subject application at the Examiner's earliest convenience earnestly are solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

63. (Amended) A control system for controlling a telephony system, comprising:
a speech recognition user interface for allowing a user to input speech commands for
controlling the telephony system, said speech recognition user interface comprising:

- (i) means for receiving an input speech command;
 - (ii) means for storing a plurality of reference word models;
 - (iii) means for comparing the input speech command with the stored reference word
models to generate a recognition result; and
- control means, responsive to the recognition result generated by said speech recognition
user interface, for controlling the telephony system in accordance with the input speech
command;

[wherein said speech recognition user interface is adapted to be able to recognize
continuously spoken commands comprising a plurality of words defining a desired telephony
service and an identifier of another user;

wherein said speech recognition user interface further comprises means for storing a
language model which defines sequences of the reference word models which can be compared
with the input speech command, in order to define allowed input speech commands; and

wherein said comparing means is operable to compare the input speech command with
selected sequences of the reference word models, selected in accordance with the stored language

model and wherein said control means comprises execution means for executing an operation corresponding to the input speech command]

wherein said control means controls the telephony system so as to reproduce a stored message using the recognition result generated by said speech recognition user interface;

wherein said message is stored with an identifier for identifying the caller that has left the message; and

wherein said control means is operable to display a list of messages to be reproduced upon instruction to reproduce the message identified by said identifier.

65. (Amended) A system according to claim 142 [63], wherein the execution means further comprises:

(i) means for holding current system status information;

(ii) means for checking that the operation corresponding to the speech command does not conflict with the current system status information; and

(iii) means for requesting the user to confirm the speech command prior to execution if said checking means determines that the input speech command does not conflict with said current system status information, and

wherein a buffer is provided for buffering new system status information which is generated whilst said execution means awaits user confirmation.

67. (Amended) A system according to claim 64 [63], wherein the desired telephony service comprises one of the following services: setting up a call, transferring a call, holding a call, returning to a call, setting up a conference call, and message selection and replaying.

70. (Amended) A system according to claim [69] 63, wherein said [execution] control means comprises means for predicting, using current system status information, what telephony service is wanted if the user inputs, via said speech recognition user interface, only the identifier of another user.

72. (Amended) A system according to claim 71, further comprising means for receiving a new input speech command comprising two or more whole words; means for generating a word model for each of the words contained within the new input speech command, if they do not already exist; and means for adapting [the] a language model used by said speech recognition user interface to accommodate the new speech command.

76. (Amended) A system according to claim 75, wherein the [execution] control means is operable to communicate with each of the users via the respective communication devices, information representative of the current status of the system.

83. (Amended) A system according to claim 75, further comprising means for sharing use of said speech recognition user interface and said [execution] control means between a number of different users.

89. (Amended) A control system for controlling a telephony system, comprising:
a speech recognition user interface for allowing a user to input speech commands for controlling the telephony system, the speech recognition user interface comprising:

- (i) an input terminal for receiving an input speech command;
 - (ii) a memory for storing a plurality of reference word models; and
 - (iii) a comparator for comparing the input speech command with the stored reference word models to generate a recognition result; and
- a controller, responsive to the recognition result generated by said speech recognition user interface, for controlling the telephony system in accordance with the input speech command;
- [wherein said speech recognition user interface is adapted to be able to recognize continuously spoken commands comprising a plurality of words defining a desired telephony service and an identifier of another user;

wherein said speech recognition user interface further comprises a memory for storing a language model which defines sequences of the reference word models which can be compared with the input speech command, in order to define allowed input speech commands; and

wherein said comparator is operable to compare the input speech command with selected sequences of the reference word model, selected in accordance with the stored language model

and wherein said controller comprises a command executioner for executing an operation corresponding to the input speech command]

wherein said controller is operable to control the telephony system so as to reproduce a stored message using the recognition result generated by said speech recognition user interface;

wherein said message is stored with an identifier for identifying the caller that has left the message; and

wherein said controller is operable to display a list of messages to be reproduced upon instruction to reproduce the message identified by said identifier.

91. (Amended) A system according to claim 146 [89], wherein the command executioner further comprises:

- (i) a memory for holding current system status information;
- (ii) a checker for checking that the operation corresponding to the input speech command does not conflict with the current system status information; and
- (iii) a prompter for requesting the user to confirm the speech command prior to execution if said checking means determines that the input speech command does not conflict with the current system status information, and

wherein a buffer is provided for buffering new system status information which is generated whilst the execution means awaits user confirmation.

93. (Amended) A system according to claim 90 [89], wherein the desired telephony service comprises one of the following services: setting up a call, transferring a call, holding a call, returning to a call, setting up a conference call, and message selection and replaying.

96. (Amended) A system according to claim [95] 89, wherein the [command executioner] controller comprises a predictor for predicting, using current system status information, what telephony service is wanted if said user inputs, via said speech recognition user interface, only the identifier of another user.

98. (Amended) A system according to claim 97, further comprising an input for receiving a new input speech command comprising two or more whole words; a word model generator for generating a word model for each of the words contained within the new input speech command, if they do not already exist; and an adaptor for adapting [the] a language model used by said speech recognition user interface to accommodate the new input speech command.

102. (Amended) A system according to claim 101, wherein said [command executioner] controller is operable to communicate with each of the users via the respective communication devices, information representative of the current status of the system.

109. (Amended) A system according to claim 101, further comprising a multiplexer for time sharing the use of said speech recognition user interface and said [command executioner] controller between a number of different users.

112. (Amended) A method of controlling a telephony system comprising the steps of:
receiving an input speech command [comprising a plurality of continuously spoken words defining a desired telephony service and an identifier of another user];

storing a plurality of reference word models [and a language model which defines sequences of the reference word models which can be compared with the input speech command, in order to define allowed input speech commands];

comparing an input speech command with [selected sequences of] the stored reference word models[, selected in accordance with the stored language model,] to generate a recognition result; and

controlling the telephony system in accordance with the generated recognition result by executing an operation corresponding to the input speech command;

wherein said controlling step controls the telephony system so as to reproduce a stored message using the recognition result generated in said comparing step;

wherein said storing step stores said message together with an identifier for identifying the caller that left the message; and

wherein said controlling step displays a list of messages to be reproduced upon instruction to reproduce the message identified by said identifier.

114. (Amended) A method according to claim 150 [112], wherein the executing step further comprises the steps of:

- holding current system status information;
- checking that the operation corresponding to the input speech command does not conflict with the current system status information;
- requesting the user to confirm the speech command prior to execution if said checking step determines that the input speech command does not conflict with the current system status information, and
- buffering new system status information which is generated whilst the executing step awaits user confirmation.

116. (Amended) A method according to claim 113 [112], wherein the desired telephony service comprises one of the following services: setting up a call, transferring a call, holding a call, returning to a call, setting up a conference call, and message selection and replaying.

119. (Amended) A method according to claim [118] 112, wherein said [executing] controlling step comprises the step of predicting, using current system status information, what telephony service is wanted if the user's spoken input command does not identify a desired telephony service.

121. (Amended) A method according to claim 120, further comprising the steps of:
receiving a new input speech command comprising two or more whole words; generating a word model for each of the words contained within the new input speech command, if they do not already exist; and adapting [the] a language model used in said comparing step to accommodate the new speech command.

124. (Amended) A method according to claim 112, wherein said [executing] controlling step communicates with each of the users via a respective communication device, information representative of the current status of the system.

131. (Amended) A computer readable medium storing computer executable process steps for controlling a telephony system, the process steps comprising:

steps for providing a speech recognition user interface for allowing a user to input speech commands for controlling the telephony system, comprising:

- (i) steps for receiving an input speech command;
 - (ii) steps for storing a plurality of reference word models; and
 - (iii) steps for comparing the input speech command with said stored reference word models to generate a recognition result; and
- steps for controlling the telephony system in accordance with the input speech command;

[wherein the speech recognition user interface is adapted to be able to recognize continuously spoken commands comprising a plurality of words defining a desired telephony service and an identifier of another user;

wherein said steps for providing a speech recognition user interface further comprises steps for storing a language model which defines sequences of the reference word models which can be compared with the input speech command, in order to define allowed input speech commands; and

wherein said steps for comparing include steps for comparing the input speech command with selected sequences of said reference word model, and wherein the steps for controlling comprises steps for executing an operation corresponding to the input speech command]

wherein said controlling step controls the telephony system so as to reproduce a stored message using the recognition result generated in said comparing step;

wherein said storing step stores said message together with an identifier for identifying the caller that left the message; and

wherein said controlling step displays a list of messages to be reproduced upon instruction to reproduce the message identified by said identifier.

134. (Amended) A computer executable program for controlling a telephony system, the program comprising:

a code for instructing the telephony system to provide a speech recognition user interface for allowing a user to input speech commands for controlling the telephony system, the speech recognition user interface code comprising:

(i) a code for instructing the telephony system to receive an input speech command;

(ii) a code for instructing the telephony system to store a plurality of reference word models; and

(iii) a code for instructing the telephony system to compare the input speech command with the stored reference word models to generate a recognition result; and

a code for controlling the telephony system in accordance with the input speech command in dependence upon the generated recognition result;

[wherein the speech recognition user interface is adapted to be able to recognize continuously spoken commands comprising a plurality of words defining a desired telephony service and an identifier of another user;

wherein said speech recognition user interface code further comprises a code for instructing the telephony system to store a language model which defines sequences of the reference word models which can be compared with the input speech command, in order to define allowed input speech commands; and

wherein said code for comparing includes a code for instructing the telephony system to compare the input speech command with selected sequences of the reference word model,

selected in accordance with the stored language model and wherein said code for controlling comprises a code for instructing the telephony system to execute an operation corresponding to the input speech command]

wherein said code for controlling the telephony system further comprises a code to control a telephony system so as to reproduce a stored message using the recognition result generated by said speech recognition user interface;

wherein said code for controlling the telephony system further comprises code for storing said message with an identifier for identifying the caller that left the message; and

wherein said code for controlling further comprises code for instructing the telephony system to display a list of messages to be reproduced upon instruction to reproduce the message identified by said identifier.